

in dough compositions as an anti-staling agent in an amount effective to reduce staling without causing undue dough stickiness. Further, dependent claims 31, 43, 49, and 59 have been amended to claim particularly preferred amounts of polydextrose. These amendments have support in the first full paragraph of page 7 of the specification.

I. The Claims Comply 35 U.S.C. § 112, First Paragraph

Claims 39-47 and 56-63 stand rejected under 35 U.S.C. § 112, First Paragraph as containing subject matter which allegedly was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the Examiner alleges that the limitation “leavening agent” has no support in the specification, and that an amount of polydextrose of from 5 to 10 percent for use in a bread product does not have support in the specification. These rejections are traversed and Applicant respectfully submits that the claims, as amended, comply with the requirements of 35 U.S.C. § 112, First Paragraph.

With regard to the limitation “leavening agent”, although the specification only exemplifies the use of yeast as a leavening agent in bread products, the specification does state “[t]he present invention can be used with commonly used dough preparation processes.” *Specification*, page 7. Additionally, other leavening agents, such as baking powder, are exemplified for use in other baked products. *See Specification*, page 17. Further, it is generally known, through “commonly used dough preparation processes,” that leavening agents, such as yeast, baking powder, and/or other chemical leavening agents, are required in order for dough to rise during baking. It is submitted that one of ordinary skill in the art would understand from the

specification, as originally filed, that the inventor, through “commonly used dough preparation processes,” was in possession of the broader concept of generally known leavening agents, particularly since at least two leavening agents, namely yeast and baking soda, are exemplified in the specification for use in dough preparation. Therefore, the Applicant respectfully traverses this rejection.

With reference to the examiner’s rejection of certain claims based on the limitation of an amount of polydextrose ranging from 5 to 10 percent, the Applicant respectfully submits that the claims, as amended, overcome this rejection. In particular, the claims directed to bread products have been amended to recite polydextrose in an amount effective to reduce staling without causing undue dough stickiness, with the range of 1 to 5 percent being preferred. The claims now require an amount of polydextrose ranging from 1 to 5 percent in the baked bread products. Therefore, for at least these reasons, the claims comply with the requirements of 35 U.S.C. § 112, First Paragraph.

II. The Claims Are Patentable Over Dartey *et al.*

Claims 30-31, 36, and 48-50 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Dartey *et al.*, U.S. Patent No. 4,678,672 (“Dartey”). Further, claims 37-38, and 54-55 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dartey in view of *The Encyclopedia of Chemical Technology*, 1992 Edition (“*The Encyclopedia of Chemical Technology*”). These rejections are respectfully traversed and reconsideration is requested for the reasons which follow.

The independent claims of the present application relate to methods for making baked products having improved anti-staling properties, as well as to baking dough used in methods for baking which provide baked products with improved anti-staling properties. The present inventors have surprisingly found that water-soluble polydextrose can serve as an anti-staling agent when employed in an amount effective to reduce staling without causing undue dough stickiness. In particular, amounts between about 1 to about 10 percent by weight, based on the weight of the flour, of a water-soluble polydextrose anti-staling agent gives a surprising improvement in the staling properties of baked products. None of the prior art cited by the Examiner teaches the use of water-soluble polydextrose in baked products in such amounts, or recognizes this unique property of water-soluble polydextrose.

Dartey teaches a reduced calorie cracker product produced from dough compositions which may, according to Dartey, contain 25-85 percent by weight of flour, 0-10 percent by weight of fat or shortening, 5-20 percent by weight of a water-soluble polydextrose, 0-5 percent by weight of an emulsifier, 0.5 to about 5 percent by weight of a leavening system, and 1.5 to 10 percent of a cellulosic bulking agent.

First, with regard to the rejection under 35 U.S.C. § 102(b), when the prior art discloses a range which touches the claimed range, but no specific examples falling within the claimed range are disclosed, a case by case determination must be made as to anticipation. In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute". *In re Schaumann*, 197 USPQ 5 (CCPA 1978). What constitutes a "sufficient specificity" is fact dependent. If the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence

of unexpected results within the claimed narrow range, "it may be reasonable to conclude that the narrow range is not disclosed with 'sufficient specificity' to constitute an anticipation of the claims. The unexpected results may also render the claims unobvious." *MPEP*, Section 2131.03.

✱ In the present case, the Examiner alleges that the disclosure of a polydextrose range endpoint of 5.5 percent by weight of flour anticipates the claimed range even though the "examples show a higher amount of polydextrose". *Office Action*, Section 3. The Applicant respectfully submits that this disclosure of a range endpoint, with no specific exemplification of embodiments with polydextrose amounts near the lower end of the range, does not amount to the "sufficient specificity" required for anticipation under the statute.

Further, the stated objective of Dartey is to provide reduced calorie crackers with a calorie reduction of at least 25 percent through replacing either the flour component or the fat/shortening component of the cracker dough with polydextrose. *See Dartey*, col 8, ln 20-24. According to Dartey, such reduced calorie crackers must have about 2.9-3.3 calories/gram. *See Dartey*, col 8, ln 15-17. This is important because a skilled person reading Dartey would conclude that a composition with a high flour content and a low polydextrose content, as would be required to arrive at the present invention, would not achieve the desired level of caloric reduction. Thus, such compositions are not actually contemplated by Dartey. Further, Dartey does not teach or suggest the unexpected ability of water-soluble polydextrose to provide for anti-staling properties as is recognized by the present invention.

When the Dartey disclosure is critically analyzed, the endpoints of the broad ranges relied upon by the Examiner to allegedly anticipate the present claims, also do not total to 100 wt %.

First, Dartey states that water is “of course necessary” in an amount from about 10 to about 30 wt % and that fat/emulsifiers need be present in an amount from about 3 to about 10 wt %. *See Dartey*, col 14, ln 6-16. When the minimum amounts of water (10 %), fat/emulsifier (3 %), leavening agent (0.5 %), cellulosic bulking agent (1.5 %), and polydextrose (5 %) are summed, the maximum amount of flour which can possibly be present is 80 wt %. Therefore, the only disclosure relied upon by the Examiner to allegedly anticipate the present claims (range endpoints of 85 % flour and 5 % polydextrose) is clearly erroneous based on the entirety of Dartey disclosure, and it is not clear what the correct ranges should be.

Moreover, Example 1 of Dartey discloses a composition including 49.72% by weight of flour and 9.31% by weight of polydextrose, based on the total weight of the dough. Example 2 of Dartey discloses a composition including 43.81% by weight of flour and 8.93% by weight of polydextrose, based on the total weight of the dough. In terms of the weight percent of polydextrose, based on the weight of the flour, example 1 of Dartey contains 18.7% by weight polydextrose, and example 2 of Dartey contains 16.6% by weight of polydextrose. Thus, examples 1-2 of Dartey clearly fall outside the scope of all of the claims of the present application. Accordingly, Dartey does not anticipate the present claims and, for at least these reasons, the rejection of claims 30-31, 36, and 48-50 under 35 U.S.C. § 102(b) as being anticipated by Dartey is respectfully traversed.

With respect to the broad disclosure of Dartey and the alleged obviousness of the present claims, at first glance, the ranges given for the various ingredients appear to overlap with the claimed ranges of ingredients of the present invention. Specifically, if one were to select a composition including an amount of flour at the high end of the range of Dartey (i.e. about 55-

85% by weight) and including a relatively low amount of water-soluble polydextrose (i.e. about 5-8% by weight), it may be possible to arrive at a composition according to the present invention. However, as discussed above, Dartey clearly does not contemplate such compositions and, in fact, teaches a skilled person away from employing the relative amounts of flour and polydextrose which are employed by the present invention.

In order to arrive at the present invention, a skilled person would have to select a dough composition from Dartey having a flour content at the high end of the disclosed range (i.e. about 55-85% by weight). Since the 25% calorie reduction can only be achieved following the teachings of Dartey by reducing flour or replacing fats/shortening with water-soluble polydextrose, selecting a flour content at the high end of the range means that the 25% caloric reduction must be achieved primarily by replacement of fats/shortening with water-soluble polydextrose. In other words, the more flour present in the composition, the more fats/shortening must be replaced by water-soluble polydextrose to achieve the desired caloric reduction, therefore the more water-soluble polydextrose in the composition.

This is important because a skilled person reading Dartey would conclude that a composition with a high flour content and a low water-soluble polydextrose content, as would be required to arrive at the present invention, would not achieve the desired level of caloric reduction. Thus, such compositions are not contemplated by Dartey. This is consistent with Examples 1-2 of Dartey. In Example 1, the flour content is higher than the flour content of Example 2, and thus, the polydextrose content in Example 1, relative to the flour content (i.e., 18.7%), is also higher than the polydextrose content of Example 2, relative to the flour content (i.e., 16.6%).

Accordingly, for these reasons the teachings of Dartey, when considered as a whole, do not lead a skilled person to the particular methods or compositions of the present invention. In addition, the Examiner has relied on *The Encyclopedia of Chemical Technology* as teaching the addition of enzymes to improve volume, texture and storage properties of bread. However, this reference does not cure the deficiencies of Dartey with regard to teaching the appropriate quantity of water-soluble polydextrose to be used in the compositions of the present invention. For these reasons, it is considered that claims 30-63 are clearly novel and unobvious over Dartey taken alone, or in combination with *The Encyclopedia of Chemical Technology*. Favorable consideration and withdrawal of the rejection is respectfully requested.

III. The Claims Are Patentable Over Engelbrecht *et al.*

Claims 30-32, 34, 39-41, 48-49, and 51-52, and 56-59 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Engelbrecht *et al.*, U.S. Patent No. 5,164,216 (Engelbrecht). Further, claims 33, 35, 37-38, 42, 45-47, 53-55, and 61-63 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Engelbrecht in view *The Encyclopedia of Chemical Technology*. This rejection, at least insofar as it applies to the claims as amended, is respectfully traversed and reconsideration is requested for the reasons which follow.

Engelbrecht relates to a microwaveable bread product made from dough which may include flour, water, leavening agent, about 7 to about 15 percent by weight of shortening, based on the total weight of flour, and about 2.0 percent by weight of fiber, based on the total weight of the flour. Among the materials which are mentioned for use as fiber in the Engelbrecht patent are oat bran, wheat bran, soy polysaccharide, psyllium mucilloid, methyl cellulose, and

polydextrose. *See Engelbrecht*, col. 3, ln 55-58. Further, Engelbrecht discloses that soluble and insoluble fibers, and natural and synthetic fibers work equally well. *See Engelbrecht*, col. 3, ln 53-55.

Based on the state of the art as of the filing date of the present application, the passing reference in Engelbrecht to the use of polydextrose as a fiber material, without specific exemplification, does not render the present claims unpatentable. More specifically, Engelbrecht provides a broad, generic disclosure of a number of parameters (*i.e.*, type of polydextrose, type of fiber, solubility of fiber, amount of fiber, and amount of flour) which could be potentially manipulated to arrive at something similar to the present invention, as claimed in the amended claims. This, however, is clearly insufficient to establish anticipation under 35 U.S.C. § 102(b) which requires identity of disclosure. *See In re Meyer*, 202 USPQ 175, 179 (C.C.P.A. 1979). Most importantly, nowhere in Engelbrecht is the specific use of *water-soluble polydextrose* exemplified, or even disclosed.

With respect to the issue of obviousness, there must be some reason, suggestion or motivation in the art to make the specific combination of the various disclosed parameters in the manner required to arrive at the presently claimed invention. *See, e.g., In re Deminski*, 230 USPQ 313, 316 (Fed. Cir. 1986). The mere fact that the parameters of the prior art could be so combined does not make the combination obvious unless the prior art suggested the desirability of the combination. *See, e.g., In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984). No such suggestion is present in the record for making this specific combination; therefore, any rejection on this basis could only be supported by impermissible hindsight.

As discussed above, the basis of the presently claimed invention is the use of a specified amount of water-soluble polydextrose to inhibit staling in various yeast leavened baked products and/or in leavened bread products. ~~§~~The art of record does not disclose the claimed methods or the dough compositions used in the claimed methods, and provides no disclosure leading one of ordinary skill in the art to use polydextrose in the manner claimed to achieve the anti-staling effect.

In addition, the Examiner has relied on *The Encyclopedia of Chemical Technology* as teaching the addition of enzymes to improve volume, texture and storage properties of bread. However, this reference does not cure the deficiencies of Engelbrecht with regard to teaching the appropriate quantity of water-soluble polydextrose to be used in the compositions of the present invention. Moreover, neither Engelbrecht nor *The Encyclopedia of Chemical Technology* recognize the significant, unexpected beneficial effect of adding water-soluble polydextrose to a baked product of providing anti-staling properties.

Accordingly, all of the present claims are considered to be unobvious over Engelbrecht taken alone or in combination with *The Encyclopedia of Chemical Technology* (or any other art of record) on the basis that a person of ordinary skill in the art when reading Engelbrecht would have no reason or motivation to select all of the various parameters as required to arrive at the present invention. For at least these reasons, favorable consideration and withdrawal of the rejection over Engelbrecht in combination with *The Encyclopedia of Chemical Technology* is respectfully requested.

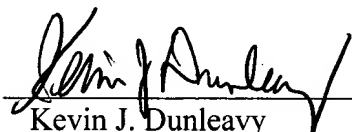
The Commissioner is hereby authorized to charge any fees which may be required to Deposit Account No. 50-0206, Reference No. 54874.000013.

S.N.: 08/796,305
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Entry of this amendment and issuance of a Notice of Allowance are requested.

Respectfully submitted,

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